

DOCUMENT RESUME

ED 167 472

SO 011 551

AUTHOR Etling, Arlen
TITLE Collaboration for Materials Development. A Workshop in Materials Development for Nonformal Education in Indonesia. Training Notes Series, No. 2.
INSTITUTION Massachusetts Univ., Amherst. Center for International Education.
SPONS AGENCY Agency for International Development (Dept. of State), Washington, D.C.
PUB DATE 77
NOTE 49p.; For related documents, see SO 011 549-550
AVAILABLE FROM Publications Assistant, Center for International Education, Hills House South, University of Massachusetts, Amherst, Massachusetts 01003 (\$2.00)

EDRS PRICE MF-\$0.83 Plus Postage. HC Not Available from EDRS.
DESCRIPTORS Adult Education; Case Studies; Change Agents; Comparative Education; Cooperation; Decision Making; *Developing Nations; Educational Games; Educational Objectives; *Foreign Countries; Learning Activities; *Material Development; *Nonformal Education; Problem Solving; *Resource Staff Role; Rural Areas; Rural Development; Rural Education; Skill Development; *Teaching Methods; Values; Workshops
IDENTIFIERS Indonesia

ABSTRACT

The booklet presents goals and activities to help practitioners of nonformal education design workshops for developing nations. Major objectives are to help nonformal educational practitioners become more sensitive to the needs of learners and to develop techniques for dealing cooperatively with people in other cultures. The document is presented in ten chapters. Chapter I stresses that collaboration between staff and students is the most effective means of teaching in a nonformal situation. Chapter II identifies key dimensions of nonformal education: it is learner-centered, flexible, loosely structured, informal, immediately useful to the learner, and relies on local resources. Chapter III describes how a nonformal workshop in Sulawesi, Indonesia was organized through cooperation between American and Indonesian staff members. Chapters IV through VII describe the materials development process, simulation game components, and criteria for selecting and developing simulation games. Chapter VIII describes kinds of facilitator intervention including prescriptive, confrontation, acceptant, and catalytic. Chapter IX traces evolution of a nonformal workshop in Bahasa, Indonesia, in which Indonesian and American staff members cooperated in materials development, objectives, and presentation. Chapter X offers a checklist for collaborators and provides summary comments on facilitator objectives and behavior. The document concludes with an appendix containing educational games.

(DB)

ED167472

"PERMISSION TO REPRODUCE THIS
MATERIAL IN MICROFICHE ONLY
HAS BEEN GRANTED BY

P. Kairer

TO THE EDUCATIONAL RESOURCES
INFORMATION CENTER (ERIC) AND
USERS OF THE ERIC SYSTEM."

U.S. DEPARTMENT OF HEALTH,
EDUCATION & WELFARE
NATIONAL INSTITUTE OF
EDUCATION

THIS DOCUMENT HAS BEEN REPRO-
DUCED EXACTLY AS RECEIVED FROM
THE PERSON OR ORGANIZATION ORIGIN-
ATING IT. POINTS OF VIEW OR OPINIONS
STATED DO NOT NECESSARILY REPRESENT
OFFICIAL NATIONAL INSTITUTE OF
EDUCATION POSITION OR POLICY

COLLABORATION
FOR
MATERIALS DEVELOPMENT

A Workshop in Materials Development for
Nonformal Education in Indonesia

ARLEN ETLING



Center for International Education
University of Massachusetts, Amherst, Massachusetts

Training Notes Series, No. 2

SP-011551

TRAINING NOTES SERIES

Training Notes are a series of monographs which highlight training issues in the field of nonformal education. Based on training designs which have been devised and used by Fellows of the Center for International Education in the United States and overseas, the notes discuss significant issues which the authors have encountered in their training experiences.

Papers are selected for the series by virtue of their ability to focus attention on basic themes in training for nonformal education and on the basis of their estimated utility to practitioners. The editors reserve the right to abridge manuscripts of inappropriate length and will submit page proof to authors upon request. Papers not selected for publication will be returned to authors with readers' comments.

A periodic list of papers constituting the series will be issued to facilitate requests for desired copies. Reissues or deletions from the list will be determined on the basis of demand or estimates of the paper's continuing utility.

Views expressed in these papers are the author's and should not be considered to represent the views of the Center for International Education.

Requests for copies should be sent to: Publications Assistant, Center for International Education, Hills House South, University of Massachusetts, Amherst, Mass. 01003. Full payment should be included with orders for documents.

TABLE OF CONTENTS

	<u>Page</u>
Author's Note	vii
Consultation or Collaboration	1
What is Nonformal Education	2
Sulawesi--The Birth of a Workshop	5
A Materials Development Process	7
Simulation Game Components	9
Materials Principles	12
Preparations for the Workshop	13
The Collaborator as Facilitator	13
Evolution of the Workshop	16
Summary	17
A Collaborator Checklist	18
 APPENDICES	 23
I. Simulation Worksheets	25
II. Barrio--Board Simulation Game	27
III. Bintang Anda--Indonesian Simulation	33
IV. Gotong Rojong--The Community Game	35
V. Galacang--Indonesian Skill Practice Game	43
VI. School--Indonesian	45
VII. Marbles--Skill Practice Game	47
VIII. Beklang (Jacks)--Skill Practice Game	49

Authors Note . . .

Materials development for village level learning systems is a critical issue in nonformal education. Curriculum development theories provide initial guidance in approaching this issue, but most curriculum theorists are school-oriented. Their values and assumptions are not always sensitive to conditions in nonformal education settings.

This training note emphasizes not only the product of materials development. It also focuses on the role of the outside resource person in catalyzing local initiative to resolve local materials development needs.

My hope is that this note will become a convivial tool--a resource to be shared, adapted and, above all, applied to other settings.

Arlen Etling
Agricultural Education Department
University of Arizona
Tucson, Arizona

Consultation or Collaboration

The "airport" consultant is under fire. This expert flies into a country, quickly assesses the situation, prescribes a solution (often worked out on the plane enroute), and flies off before the consequences of the expert advice emerge. This consultant's paternalistic motto seems to be "my technology/experiences/hypothesis is the answer; now what are your questions"?

Even in technical areas where technical advice is needed, technology must be adapted to local constraints. Too many horror stories have resulted when the outside expert has ignored cultural constraints as well as limits imposed by a different infrastructure.

As nonformal educators become more sensitive to the needs of learners outside schools, they will rely more on collaboration than on "airport" consultation. This training note examines an attempt to deal with this dilemma during a materials development workshop in Indonesia in 1975. I was hired* as a "consultant" but wanted to play the role of collaborator. My values as well as our** goals and activities will be described and analyzed. From this experience, guidelines for collaboration in future nonformal education activities will be proposed.

*My trip was financed by the United States Agency for International Development.

**My Indonesian counterparts and I worked for the nonformal education section of the Indonesian Ministry of Education.

Since the topic of the workshop was materials development, a second focus of this paper will be the techniques used and the products which resulted. Center for International Education (C.I.E.) members have devised these techniques and stimulated development of a variety of materials which fall into three categories: social simulation games, skill practice games and self-expression materials.

These have particular relevance to nonformal education. They have proven to be effective replacements for textbooks in many situations. Sometimes the materials are indigenous games modified to fill specific educational functions. Often materials which have worked in one setting can be adapted to another culture.

Since both issues, collaboration and materials development, are to be discussed within the context of nonformal education, some parameters are in order. Nonformal education has various meanings for different individuals. I must state my assumptions as a base for the rest of the paper.

What is Nonformal Education?

Coombs¹ says it is:

. . . any organized educational activity outside the established formal system--whether operating separately or as an important feature of some broader activity--that is intended to serve some identifiable learning clienteles and learning objectives.

Nonformal education is difficult to define satisfactorily, and some even feel that definitions confine more than clarify. Since nonformal educational

¹Philip Coombs, New Paths to Learning for Rural Children and Youth (New York: International Council for Educational Development, 1973), p. 11.

activities are numerous and diverse, a single definition which applies to all is difficult to develop. Further, because education too often tends to be thought of in terms of schooling, we must be careful to state our assumptions so that this misconception is avoided.

Certain key dimensions can be identified for particular nonformal education settings. These dimensions are contextual. They may vary from one international setting to another. My background led me to emphasize six dimensions which guided my approach to nonformal education in Indonesia.

1. Learner-centered means that emphasis is on learning rather than on teaching. The learner participates in determining educational objectives and exerts substantial control over content and method. Attitudes of self-awareness and power to control environment are fostered. Local initiative, self-help and innovation are encouraged in order to equip learners to analyze critically and take action to resolve their own practical problems.
2. Cafeteria curriculum (options, variety and flexibility) is featured in place of the sequential, prescribed curriculum associated with schools. Curriculum is generated primarily by learners. A strong entertainment feature is included. Examples include local radio, village newspapers, market day exhibits, posters, mobile libraries, drama, role play, games, puppets and epic narrative. Resources and skills need not be imported or professional.
3. Informal human relationships are essential. Learners and educators are roles which ideally switch back and forth among participants.

Informal relations based on mutual respect are necessary if education is to be learner-centered and if learners are to choose from a cafeteria of learning opportunities. While this value position is often difficult for professional teachers to accept, local nonprofessional "facilitators" who see their role as catalyst, helper or enabler are often more effective than lecturers or academics.

4. Reliance on local resources means that costs are kept low without sacrificing quality, that both conventional and unconventional sources are used, and that available resources are deployed efficiently. Expensive technology is not necessary and is often undesirable. Because learners often bear part of the costs, higher motivation and greater program accountability usually result.
5. Immediate usefulness refers to educational content and methodology directly related to learners' life styles. Formal schooling often has a delayed impact through its orientation to future application. Nonformal education should involve short term activities with a present time orientation and immediate impact.
6. Low level of structure is necessary when local situations vary tremendously between and within themselves. Since a high level of structure means a high level of control, learner-centered approaches, informal human relationships and immediate usefulness are all difficult under tightly controlled situations. Flexibility is sacrificed for control. But flexibility is necessary for the needs of individuals, subcultures, and minorities. Voluntary organizations

and amateurs who learn on the job are favored over governmental programs featuring bureaucratic approaches managed by civil servants. Decentralization is necessary to allow local approaches to local problems.

As I entered my responsibilities in Indonesia I depended on my Indonesian counterparts to validate these dimensions--to place them in local perspective. But the dimensions served as my personal reference points throughout the experience.

Sulawesi--The Birth of a Workshop

These dimensions came largely from C.I.E.'s nonformal education project in Ecuador. Due to its experience there, C.I.E. was invited to provide a specialist in materials development for a workshop in Sulawesi (Celebes), Indonesia.

In an effort to emulate participatory decision making, a C.I.E. value for nonformal education, I was chosen in an open meeting of applicants for the specialist position. The selection process involved personal and group assessment of each applicant's qualifications and shortcomings for the position. In this way some of the ego was deflated from the specialist's consultant role.

After this process was completed, only a week was left to prepare. I sorted my own files and C.I.E. resources, selecting those which fit air travel restrictions and seemed most pertinent: literacy, fluency and simulation game descriptions; examples of self-expression materials such as rubber

stamps and fotonovelas; evaluation procedures and instruments; lists of ideas on village education from C.I.E. classes and brainstorm sessions; notes on curriculum development approaches; previous materials development workshop outlines; group dynamics exercises; training approaches; a checklist on workshop organization; a slide set on C.I.E.'s approach to nonformal education; and Area Handbook for Indonesia.²

Much of this information was reviewed during the twenty-hour plane trip. My review helped me to identify key issues related to materials development (content, delivery system, production, introduction, evaluation, followup) and to anticipate several optional responses to each issue.

Upon arrival in Jakarta, I met Saleh Marzuki and G. Budihardjo (Saleh and Budi), who were to be my government counterparts in Indonesia. After several hours of getting acquainted, exploring ideas and considering their expectations, we agreed on three objectives for the workshop:

1. to develop their (Budi's and Saleh's) skills in workshop organization and direction and in materials development;
2. to prepare and introduce sample educational materials during the workshop in Sulawesi;
3. to guide workshop participants in producing two board simulation games and six skill practice games for pilot testing and evaluation.

During the initial discussions, I concentrated on becoming a resource person with experience and ideas related to participative approaches to non-formal education and with skills in workshop organization and materials design.

²John W. Henderson et. al., Area Handbook for Indonesia (Washington, D.C.: U.S. Government Printing Office, 1970).

Together we developed a collaborative approach that combined my experience with their knowledge of Indonesia. We raised issues and explored alternatives. I avoided the "expert role" meaning that I refused to prescribe solutions for Indonesian situations, preferring to raise questions and issues related to my values of nonformal education. One question which I raised was the issue of village level participation in the workshop. The time, place, duration and participant list for the Sulawesi workshop had been previously established and all participants were district or provincial officials. My concern about the lack of village level participation had two parts: a philosophical desire to have the "target population" represented and the practical need to get specific details of village life for use in designing the simulations. The Indonesians acknowledged the issue and we all agreed to resolve it in Ujung Pandang, capital of Sulawesi.

We also decided to design sample materials to introduce early in the workshop. We felt this would familiarize me with Sulawesi and give the Indonesians some experience in materials development. As we worked on this task we followed a process which had evolved over the years through other C.I.E. workshops.

A Materials Development Process

1. Identify problems of target population. We were developing pilot materials for villages in southern Sulawesi. My counterparts identified literacy, basic math skills and motivation as the problems. We discussed whether these problems were perceived by villagers

or whether they were just concerns of government development agencies. Our discussion was inconclusive but we decided that the problems identified would stand until we were able to get villagers' input.

2. Decide on priority of problems to be attacked. With the short list of problems, we decided that we could work on each area in the time allowed.
3. Review a wide variety of sample materials. We discussed simulations, skill practice and self-expression materials from different agencies used in other countries. We also analyzed traditional Indonesian games which might be adapted to deal with the problems identified. We played some of the games to get more than a detached academic acquaintance with them (another key decision: in dealing with new materials, designers must experience the learner's perspective).
4. Discuss uses and weaknesses then determine priorities. As we analyzed the materials each of us became "turned ..." by different possibilities. We each decided to concentrate on our own project but to help each other as needed.
5. Specify objectives. This step was already accomplished in Jakarta. We had decided to produce two board simulations and six skill practice games. We also hoped to make workshop participants familiar with other educational materials to stimulate their creativity and enthusiasm to use different educational materials.

6. Adapt existing materials where possible. Starting with the adaptation of existing materials is easier than designing new materials.
7. Develop new materials when necessary. If modified materials fail to meet the objectives or to deal with identified problems, new materials may be designed.

In a very open and informal atmosphere we worked on our separate materials. I learned much about Sulawesi and the Indonesians quickly became confident with materials development. We each started with a simple project then tried something more complex. Together we discussed each other's projects as well as problems which emerged.

As we modified existing simulation games, worksheets (Appendix I) were used to break the games down into their component parts. Once broken down games can be understood more clearly. Then information and dynamics of the original cultural setting can be replaced by those of a new one.

Simulation Game Components

The components are listed below with the examples from "Barrio" a board game simulating life in a Bolivian City (Appendix II). These components are usually present in any board simulation.

1. General Situation--Cochabamba, Bolivia, 1971.
2. Specific Focus--The day-to-day economic struggle of a poor family which has just moved from a rural setting to an urban one.
3. Objective (How you win the game)--Through wise money management achieve economic stability for the family.

4. Messages (assumptions, biases, values communicated by the game)--

Primary messages: 1. Life in a Bolivian barrio is often harsh;
2. Wise investments, preventative medicine and some luck are needed to survive.

Secondary messages: 1. Food Coops can be very beneficial; 2. Education pays; 3. The Chicheria (bar) should be avoided; 4. A credit union can serve as a form of insurance against disaster.

5. Variables (decisions and chance factors)--Decisions: 1. Whether or not to buy an I.U.D.; 2. Whether or not to contribute to the

church; 3. Whether or not to join the credit union or food coop;
4. Whether or not help neighbors (other players) in time of need.

Chance factors: 1. illness; 2. taxes; 3. legal problems;
4. finding money.

6. Format--Game board which simulates weekly and monthly cycle with fixed food, housing and clothing costs; chance cards; dice.

7. Roles--The urban poor, a banker, police, doctor.

8. Process (how the games is played--usually explained by the rules)--
See rules in Appendix II.

9. Tuning--Playing the game then making adjustments so that the simulation is more realistic, the instructions are clearer, or the game is more playable. Tuning may also involve making minor changes in the game so that it is more appropriate for a particular group of participants. Issues in tuning simulation board games include:
reality (how completely and accurately is the system represented);

simplicity (can the essential features of the game and the system be understood quickly); length (how much time is necessary for playing the game); adaptability (does the game allow the players some liberty in interpreting the rules and in contributing their own experience and values); alternatives (are optional rules or suggestions provided to make the game more versatile). Since these issues interact in a board simulation, some balance is needed (i.e., a game that is extremely realistic may be too complicated).

In designing new games the same worksheets (Appendix I) may be used.

Here the designer may use a logical approach starting with the general situation and proceeding through each step in order until the game is tuned. In actuality, however, this seldom happens. Most people start with a role or an objective or a message. They build the game working on one component until they get stuck or tired, then moving on to another component before returning to the first one.

This latter approach seems to work much better. The simulation game design becomes more like a jigsaw puzzle than a linear curriculum development process. As the designer works on one component it will stimulate ideas about another component. The designer then skips to that component and works on it until ideas for still another component are suggested. As the components are built, in no particular order, the game emerges. Any of the components may be developed in any order (except tuning which must come last) as long as each component is eventually considered in relation to each of the others.

In developing games for nonformal education, however, criteria other

than the tuning issues should be considered. In the following section several such criteria are discussed. These are concerns which have surfaced after considerable experience and reflection of C.I.E. members.

Materials Principles

Simulation games can be evaluated for their effectiveness and appropriateness in nonformal education settings by using these criteria:

1. Action orientation--learners are actively involved as opposed to passively listening or observing;
2. Optional curricula--a cafeteria of choices is provided instead of a standard, sequential curriculum;
3. Inexpensive--scarce resources in villages mean that imported materials and expensive technology are usually inappropriate;
4. Easily reproducible--materials can be copied by hand and passed on to other potential learners;
5. Motivating--because the materials are fun a professional educator is not required to motivate or discipline the learners;
6. Immediately relevant--subject matter deals with current problems and can be applied to those problems at once;
7. Self-explanatory--the rules and the game board provide enough information to play the game;
8. Self-generating--people will want to copy the material, adapt it and modify it for other settings and groups;
9. Complementarity of distribution systems--the array of choices should

include various kinds of materials which support each other and appeal to different learning styles;

10. Community-based demand system--decisions on which materials to use and how to use them are made locally rather than being imposed from above.

Preparations for the Workshop

Arriving several days ahead of the workshop participants, Saleh, Budi and I began preliminary planning. We decided to hold the workshop in Bahasa Indonesia as much as possible, using English only to the extent that my involvement as a resource person was necessary (I believe this was a key decision).

In a very open and informal atmosphere I learned much about Sulawesi and my counterparts quickly became confident with materials development. They were able to understand simulation games by using the simulation worksheets to analyze sample games and then designing their own. With understanding came skill and confidence, then success. A "win/win" situation evolved which kept motivation and productivity high. With their success I became more confident in my role as a collaborator versus that of a consultant.

The Collaborator as Facilitator

My particular collaborator role was a result of my own values and the situation just described. Since I have no academic background in consulting,

I would be hard pressed to analyze that role without the help of Blake and Mouton³ who describe five consultant roles which they call "kinds of intervention:" prescription, theories and principles, confrontation, acceptant, and catalytic.

In prescriptive consulting the client is told what to do or the consultant does it for the client. The consultant takes the responsibility and makes decisions. Obviously this role conflicts with my six dimensions of nonformal education and would be inappropriate for many nonformal education settings.

Theories and principles is a kind of intervention where the consultant helps the client internalize theories in order to diagnose and deal with situations with "sound behavior". Theory is defined strictly as explicit hypotheses--systematic behavioral science formulations--that can be tested. Since nonformal education involves trial and error, common sense, conceptual systems and plans (all of which are specifically rejected in this definition of theory) this kind of intervention is also largely inappropriate for a nonformal education setting.

Confrontation is a means of challenging assumptions which distort perception. Although this role may be helpful and necessary at times, it may damage informal human relationships if overused.

Where the client needs a sense of personal security or more self-reliance, the acceptant role may be appropriate. This is often very appropriate in nonformal education (i.e., when encouraging repressed groups to

³ Robert R. Blake and Gane S. Mouton, Consultation (Reading, Massachusetts: Addison-Wesley Publishing Co., 1976), pp. 4-5 and 378.

exercise self-determination). However, because the Indonesians did not need acceptance, I used this role only to establish my attitudes toward them and to get them to use me as a resource.

The fifth kind of intervention, the catalytic role, accurately describes my attitude as a collaborator on this occasion. In consulting as in chemistry, the catalyst is an agent which, when added to other substances, causes a change in the speed of reaction but does not get used up the process. Catalytic intervention, consistent with my six nonformal education dimensions, is also very close to the "facilitator" role I had studied in Ecuador and which agrees with my perception of an effective nonformal educator.

What is a facilitator? He or she is an indirect leader, someone who develops leaders, and then fades out to allow the new leaders to take over. Direct leadership involves assuming authority for the group, delegating responsibility, making decisions, giving directions. Indirect leadership includes relinquishing authority, encouraging others, building confidence, listening actively, questioning and modeling behavior conducive to group maturity. The direct leader relies on authority, charisma and persuasive verbal skill. The indirect leader relies on reason, cooperation and non-verbal skill. A facilitator leads from behind.

A facilitator is sensitive to group dynamics and is able to observe a group and make suggestions or play roles needed by the group. A facilitator does not avoid conflict, but attempts to resolve it. Manipulation of people, thinking for them, and paternalism are all avoided by the facilitator.

I consciously tried to play the facilitator role during initial discussion

and preparation. As participants began to arrive and the time to begin formally approached, I found that Budi and Saleh were acting more and more on their own and that I was able to lower my profile.

Evolution of the Workshop

By the opening day of the workshop, Saleh had adapted the Barrio game (Appendix II). His game became "Bintang Anda" meaning your star or your fortune. It focused on decisions necessary to cope with Indonesian village life (see Appendix III). "Bintang Anda" was enlarged to cover a table two meters by three meters. One other simulation and two skill games were also in playable form.

Although the three of us communicated closely, Saleh and Budi took the lead in organizing the workshop and in guiding the process as it unfolded. They organized a formal opening ceremony which involved not only the sixteen participants, but also key political figures in the city and province. Bintang Anda was demonstrated, with high officials playing the roles of villagers. This approach was highly motivating and communicated more about village level education than would have been possible with hours of speeches.

After the high officials and dignitaries left, the workshop group analyzed and discussed the games that had just been developed. Budi and Saleh explained other materials that had been developed in Ecuador. They also explained the materials development principles followed in Ecuador. Interests were assessed and participants, including Budi, Saleh and I, were broken into four working groups for the next two days. An informal atmos-

phere aided communication among groups as they worked. Periodically the workshop would be called together to try a new game and discuss it. Then, small working groups would form again and new materials would be developed.

Amid high enthusiasm, the morning of the fourth day of the workshop involved polishing the new materials, summary and post assessment. A detailed report, given to all participants included descriptions of each material produced (two board simulations and eight fluency/skill games in playable form with ideas for eight other games in various stages of development--see Appendices IV-VIII). At the closing ceremony the dignitaries returned to give speeches, strongly supporting the determination to test the materials.

After the workshop, Saleh, Budi and I discussed a number of implementation issues including selection of the villages, selection and training of village facilitators, and philosophical and practical conflicts arising from differences between Ecuador and Indonesia. These included: 1) local input for setting objectives and designing programs, 2) problems of hierarchical decision making, 3) informal human relationships among all involved in nonformal education, and 4) the difference between self-determination and socialization as goals of education.

Summary

During this consulting experience my activities followed a clear pattern. First I had to establish my credibility and usefulness. At the same time I had to shift from an "expert" role to a "catalyst" role. I

believe both of these were accomplished through informal dialogue with my counterparts, by raising questions, by communicating my acceptance of the problem as they explained it, and by suggesting optional approaches to attack the problem.

The next stage was to transfer skills in workshop organization and materials development, to convey information about the Ecuador Nonformal Education Project, and to inspire confidence in the Indonesians to take the lead. This was possible through teamwork, dialogue and informality.

When the workshop participants arrived I supported Saleh and Budi, acted as a resource person when needed and otherwise tried to play a decreasingly important role in group leadership. I did not take the initiative again until after the workshop when I raised and discussed future problems and issues in implementing the new materials.

A Collaborator Checklist

Drawing from this experience, I would propose the following checklist to guide consultants who wish to try the facilitator role. Although the list is the result of considerable thought and dialogue it has come out of only one direct application; it should be seen as a starting point for action and discussion, not as comprehensive or highly refined.

Preparation

1. Get as much background as possible on the situation.
2. Clarify your own values of nonformal education as they relate to the situation.

3. Anticipate issues and problems.
4. Prepare alternative approaches for resolving the issues and problems.
5. Review this checklist.

Personal Value Positions

These should be stated and examined in the light of new or changing situations. The following values are my own:

1. The learner should help determine learning objectives.
2. Educational efforts should increase the independence of learners.
3. Nonformal education should encourage local initiative, self-help and innovation.
4. Nonformal education should foster critical awareness to identify and analyze problems.
5. Nonformal education should promote action to resolve problems.
6. Nonformal education should emphasize common sense approaches rather than theoretical approaches.
7. Nonformal education should have immediate and practical benefits to learners.
8. Nonformal education should avoid excess structure, programmed systems, and centralization.
9. Educators should treat learners as subjects, not objects.
10. Educators should emphasize flexibility.
11. Educators should help find local solutions to local problems.

Introducing Yourself

1. Start with an informal dialogue in a relaxed environment.
2. Establish credibility by showing interest, asking questions, and indicating preparations made.
3. Invite clients to describe the situation, then clarify it.

4. Accept the needs identified by clients as the starting point.
5. Establish yourself as a catalytic consultant (collaborator) by:
 - a. dialogue on personal values
 - b. encouraging teamwork
 - c. modeling facilitator behaviors
 - d. emphasizing the problem rather than your expertise

When You are Viewed as an Expert

1. Offer options not solutions
2. Dialogue, explore alternatives
3. Emphasize their expertise
4. Demonstrate respect for others
5. Build confidence in others
6. Support their efforts to define or redefine the problem
7. Question, listen and point out possible solutions from the answers
8. Use nonverbal communication to support others
9. Avoid paternalism and manipulation
10. Keep responsibility for solving the problem on the client

As the Situation Develops

1. Transfer leadership to others but share responsibility
2. Transfer skills and information in order to make yourself more dispensable
3. Try to lower your own profile as time passes
4. Observe local ceremonies, customs, and hierarchies while keeping the problems and values in focus and foremost
5. Emphasize participatory and "hands on" discussion and learning
6. Avoid "pulling rank"
7. Suggest procedures that might be followed to gather more information

8. Treat others as equals as much as possible (slightly more than the client is comfortable with, but not enough to destroy communication)
9. Avoid taking yourself too seriously
10. Review this checklist occasionally

Analyzing Alternatives

1. Consider the effects on all involved
2. Check each alternative against the personal value positions (above)

Post Mortem

1. Communicate problems/issues yet unresolved in a final discussion or by letter (preferably both)
2. Communicate confidence in the client to carry on

Simulation Worksheet I

SITUATION

FOCUS

OBJECTIVE

MESSAGES

VARIABLES

General

Specific

(How you win
the game)

Primary

Decision

Secondary

Chance

Assumptions

Biases

Values

APPENDIX I

Simulation Worksheet II

FORMAT

ROLES

PROCESS

TUNING

Board,
cards,
etc.

Reality
Simplicity
Time to play
Alternatives or
adaptability

Rules

APPENDIX II

Title: Barrio

Developed by: Arlen Etling

Description: Barrio is a board game meant to simulate life in an urban slum. The prototype was developed from a knowledge of conditions in Cochabamba, Bolivia. Prices and relationships reflect peso values before the devaluation of 1972. It is felt that this game has value in teaching budgeting and decision-making skills to barrio residents. It could also be used in this present form to teach the dynamics of barrio life to those who are not familiar with Cochabamba or life in a Latin American barrio. It is felt that information on any urban migrant-slum could be substituted. Another possible use, although caution and modification are advised, is to show those who are contemplating migration from the campo to the barrio many of the problems that they will encounter. Barrio is principally a board game with a banker role. It can be expanded to include other roles thus slowing down the pace and including more people and interpersonal relationships.

Operating Time: Very flexible: 30 minutes to infinity.

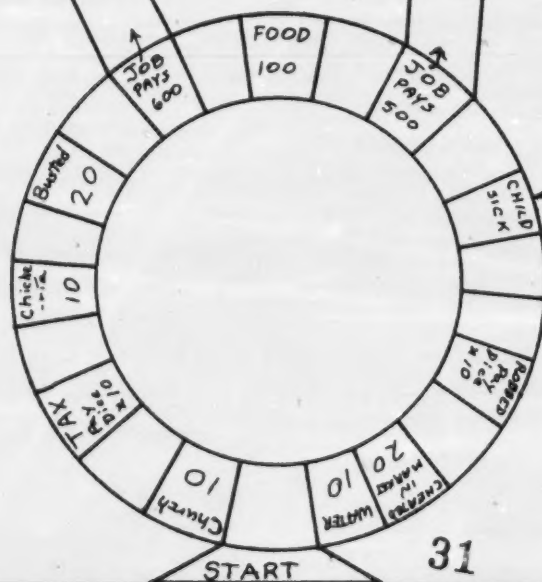
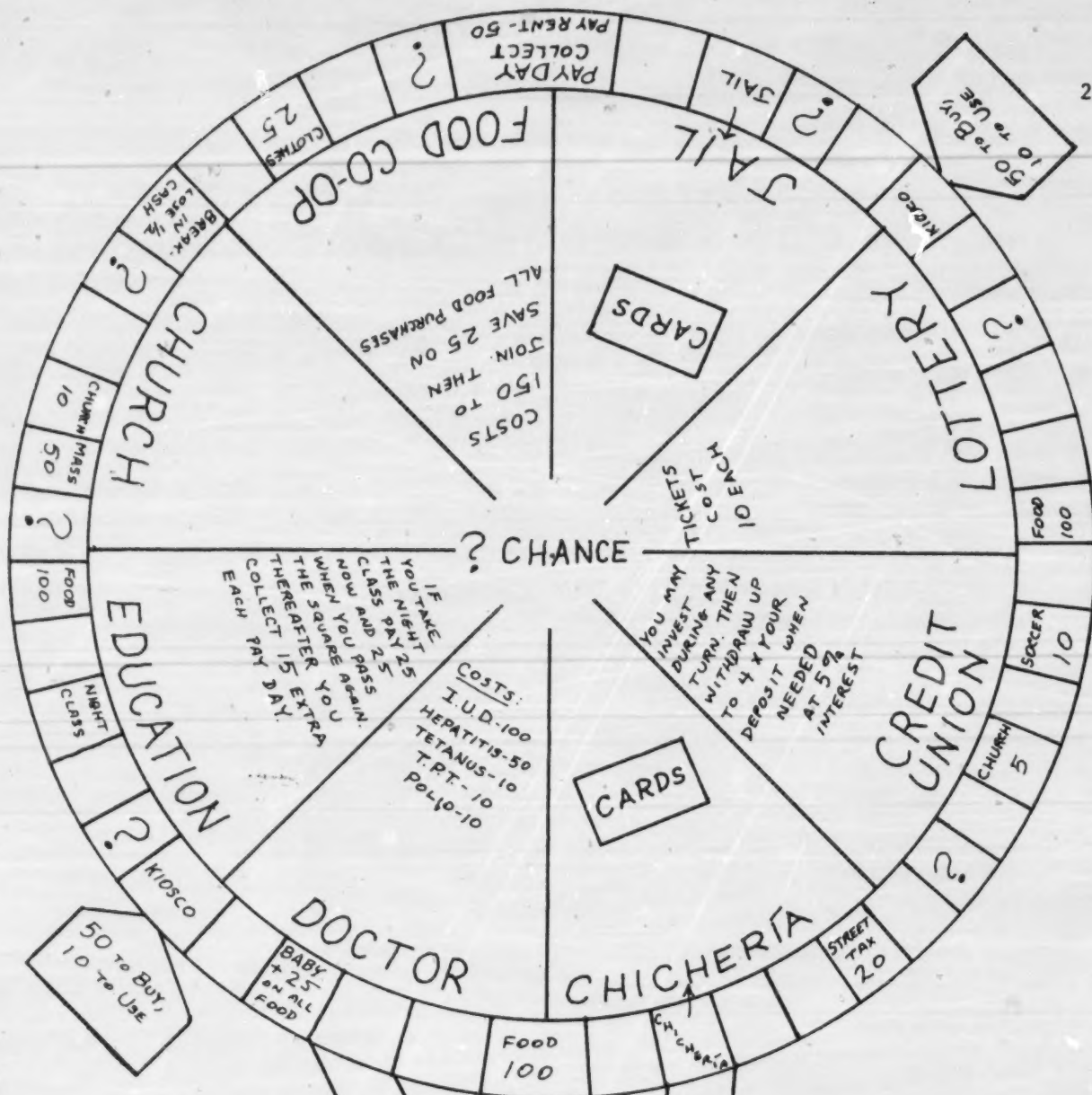
No. of Participants: 2 (banker and 1 resident) to 12 or more.

Subject Matter: Life in an urban slum: Cochabamba, Bolivia.

User Level: Practically anyone in formal or non-formal setting.

Materials: Game board
Tokens for each player
1 die

Chance Cards--		No.
Work Bonus--Collect 100		1
Accused of Theft--Go to Jail		1
Baby has diarrhea--10		5
Spouse gets typhoid. Pay 30 if not immunized		3
Relatives visit. Add 50 to next food bill		2
Hepatitis strikes. Pay 20 if not immunized		1
You are caught without your military service I.D.		
Pay 50 to avoid the draft		1
Census--Pay 60		1
You find 10--Collect		3
Church pays you 50 if you are a faithful member		2
Your son cuts his foot. Pay 30 unless immunized for tetanus		4
Lottery--If you hold a ticket you can win		
200		1
100 by rolling a 6		2
50		3
Oldest child starts school--Pay 50 for supplies		1
You break your foot playing soccer		1
Collect 200 for disability but forfeit your next paycheck		
Robbed--Lose all money not deposited in bank or credit union		2
Wife is bitchy--Go to Chicheria (cafe)		5
Meet friends--Go to Chicheria		5
Contribute 50 to chapel building fund		1
Purchase a mass--60 (minus 20 for faithful members)		1
You get paratyphoid. Doctor's bill is 40 unless immunized		3
Your dog bites a gentleman. Fine is 30		1
Chicheria Cards--		
Having fun. Pay 5 and hang around		5
Fight. Pay 10 X roll of dice and leave		1
Fight. Go to Jail		1
Pay 5 and leave		2
Upon Priest's advice you leave, if you are a faithful member		1
Jail Cards--		
Pay food bill for 1 week (usually 100) and leave		2
If you are a faithful church member, the priest intercedes		
and you may leave jail without being fined		2
Pay 30 to police and leave		2
Pay 20 to police and leave		3
Pay 10 for food costs and stay in jail		4
Property Cards--		
Lottery, IUD's, tetanus, TPT, Polio, Baby	10 each	
Night Class, Credit Union Membership	20 each	
Food Coop Membership	10	
Kiosko (Vendor's stall)	2	
Hepatitis	5	



Pay 30 to Doctor now or 10 to Priest for Prayers each time you pass the Church

BARRIO

Situation: Each player represents a family with two children which has arrived from the campo looking for a better life in the city. It is assumed that relatives will provide housing during the first days while the father seeks work. The small circle represents a week. Each player must land on a job square to obtain work. He then has the right to enter the larger monthly circle to earn money. A player must spend and save wisely in order to survive.

- Rules:
1. Roll dice, multiply by 100 for your starting sum of money.
 2. Roll dice and go either direction from start. You must land on a job square to enter the larger circle. Once direction for each circle has been established it cannot change.
 3. Collect salary only when passing payday.
 4. Pay all expenses in red squares when you pass the square. Otherwise you are affected by a square only by landing on it. (N.B. Red squares are those marked food and clothes and rent.)
 5. If 2 players land on the same square simultaneously, a fight ensues. Low roll of dice pays 30 fine. High roll pays 10. If tied, both pay 20 fine to police.
 6. Church contributions are optional upon passing depending upon whether the player considers himself a faithful member or not. Any player who lands on a church square must pay, however.
 7. A banker keeps track of all transactions and contributions by using a log for each player. He also pays salaries on pay day. He does not play on the board like the other players.
 8. All transactions must be made before the roll of dice and on the involved player's turn. Those transactions dictated by the roll of dice may take place after the dice are rolled.

Roles--Banker: logs all transactions. Makes loans. Gives advice.
 Police: collects all fines. Settles all disputes. May refer to Banker for advice if unsure.
 Priest: Collects for church. Gives advice. Helps the faithful when possible. Tries to increase church's wealth and membership.
Chichero (Bartender): Collects for use of chicheria. Gives advice.
 Doctor: Treats illnesses. Sells injections, IUD's and advice.
 Teacher: Hassles everyone about how they or their kids should be in school. Discusses discipline problems.

Comments: In playing this game at the Center for International Education we found it to be very fast-moving and engrossing. Several alternatives, improvements and clarifications were suggested.

1. A player may purchase immunizations, IUD's, lottery tickets, credit union membership and food coop membership, during any turn. Night classes are purchased, if desired, only when landing on the "night class" square. The kioskos are purchased under the same conditions as the night classes.
2. Instead of the banker handling all transactions on his log, each player might keep a log of his own transactions. The banker could "audit" at any time fining a player 50 pesos for a mistake in logging the transactions.
3. The institutions in the game could be reduced to focus on fewer variables (e.g., Food Coop, education and doctor, could be eliminated to focus on the credit union).
4. One of the institutional triangles could be left blank for the members to organize their own institution and determine rules for its use in the game.
5. In introducing the game to new players each player might collect one-half of his pay when landing on the job square of the small circle. This would make it easier to get to the first "pay day" without borrowing money. It is less frustrating this way.
6. Another circle might be added to represent life in the campo. In this case the option to return to the campo would be provided for the players.

APPENDIX III

- NAME: Bintang Anda ("Your Star" or "Your Fortune")
- Developed by: Saleh Marzuki, G. Budihardjo
- No. of players: Five
- Objective: Social Awareness; economical attitudes
- Format: One die
Five markers
One set chance cards
One set police cards
One set clinic cards
One set bank cards
One set community education cards (PENMAS)
Board which represents one month
- Procedure:
1. Five people are elected as Head of Village, Doctor, Banker, Police, and Head of PENMAS.
 2. Every player throws the die and multiplies the number by Rp. (Rupia--currency) 2,000 to determine his beginning wealth.
 3. Determine order of turns and begin. First player throws die and advances accordingly. Follow directions on squares or cards on which a turn is ended.
 4. Duties are: Doctor--convince people they should be vaccinated and accept birth control; PENMAS--advertise courses in auto-mechanic, tailoring, radio repair, etc. Head of Village--promote co-op movement, credit union, insecticides; Police--enforce law and order; Banker--advertise savings accounts, loan money to those in need.
 5. Every change in wealth or property is recorded by the banker or the facilitator.
 6. The winner is the player with the most money when play is finished (e.g., after 3 hours).

Events on the board (squares):

--sickness	pay Rp. 500
--cigarettes	pay Rp. 100
--married	pay Rp. 10,000
--food for 1 week	pay Rp. 3,000 (4 x on the board)
--sell a buffalo	earn Rp. 50,000
--radio tax	pay Rp. 100
--sell rice padi	earn Rp. 10,000
--baby	pay Rp. 10,000
--wedding ceremony	pay Rp. 100,000

Chance cards:

--sickness	pay Rp. 5,000
--fight	pay Rp. 5,000
--lottery	earn Rp. 25,000
--good crop	earn Rp. 50,000
--good egg production	earn Rp. 10,000
--bad weather	pay Rp. 10,000
--poultry disease	pay Rp. 5,000
--good health	earn Rp. 2,000
--dressmaking	earn Rp. 1,000

Doctor's cards:

--all vaccinations	cost Rp. 300
--medicine	cost Rp. 250
--IUD	cost Rp. 500

PENMAS cards:

--training to be a good farmer	cost Rp. 100
--training for mechanic	cost Rp. 1,000
--training for photography	cost Rp. 1,000
--training for tailoring	cost Rp. 1,000

Head of Village cards:

--co-op membership	cost Rp. 100
--insecticides	cost Rp. 1,000
--better seed	cost Rp. 1,000

Banker's cards:

--Savings book (card)	Rp. _____ (depends on loan or investment)
-----------------------	---

Police cards:

--unpaid loan (fine)	Rp. 20,000
--crime (fine)	Rp. 50,000
--cheating (fine)	Rp. 10,000
--won't pay tax (fine)	Rp. 10,000

Comment:

This game has not been tuned. It was developed from Barrio and uses a closed circle or rectangle as a board. It probably needs more options and more chance cards which reward wise decisions and penalize poor decisions and lack of decision. Some of the squares and cards may need changes also. For instance a marriage square should probably not be on the board as a monthly variable. But the game is playable and has been successfully used in two workshops to introduce participants to simulation gaming.

APPENDIX IV

Name: Gotong Rojong (The community game)

Developed by: Arlen Etling and G. Budihardjo

Operating time: One hour to three hours

No. of Participants: Four to twelve (could expanded)

Subject Matter: Building community in Indonesia

User Level: Practically anyone: especially designed for rural adults in Bone (Southwest Sulawesi)

Components:

- 1 game board
- 2 sets of meeting cards
- 1 set of clinic cards
- 1 set of coffee house cards
- 1 set of rice field cards
- 1 set of recreation cards
- 1 set of market cards
- 1 set of bathing area cards
- 1 set of school cards
- 25 chips each for resources (education, wealth, necessities, right living, health, happiness)
- 1 marker for each player
- 1 die or spinner
- 9 role cards (village head, school teacher, doctor, extension worker, merchant, farmer, 3 poor farmers)

Situation: Each player represents a family in the community. The objective is to achieve a strong community through Gotong Rojong.

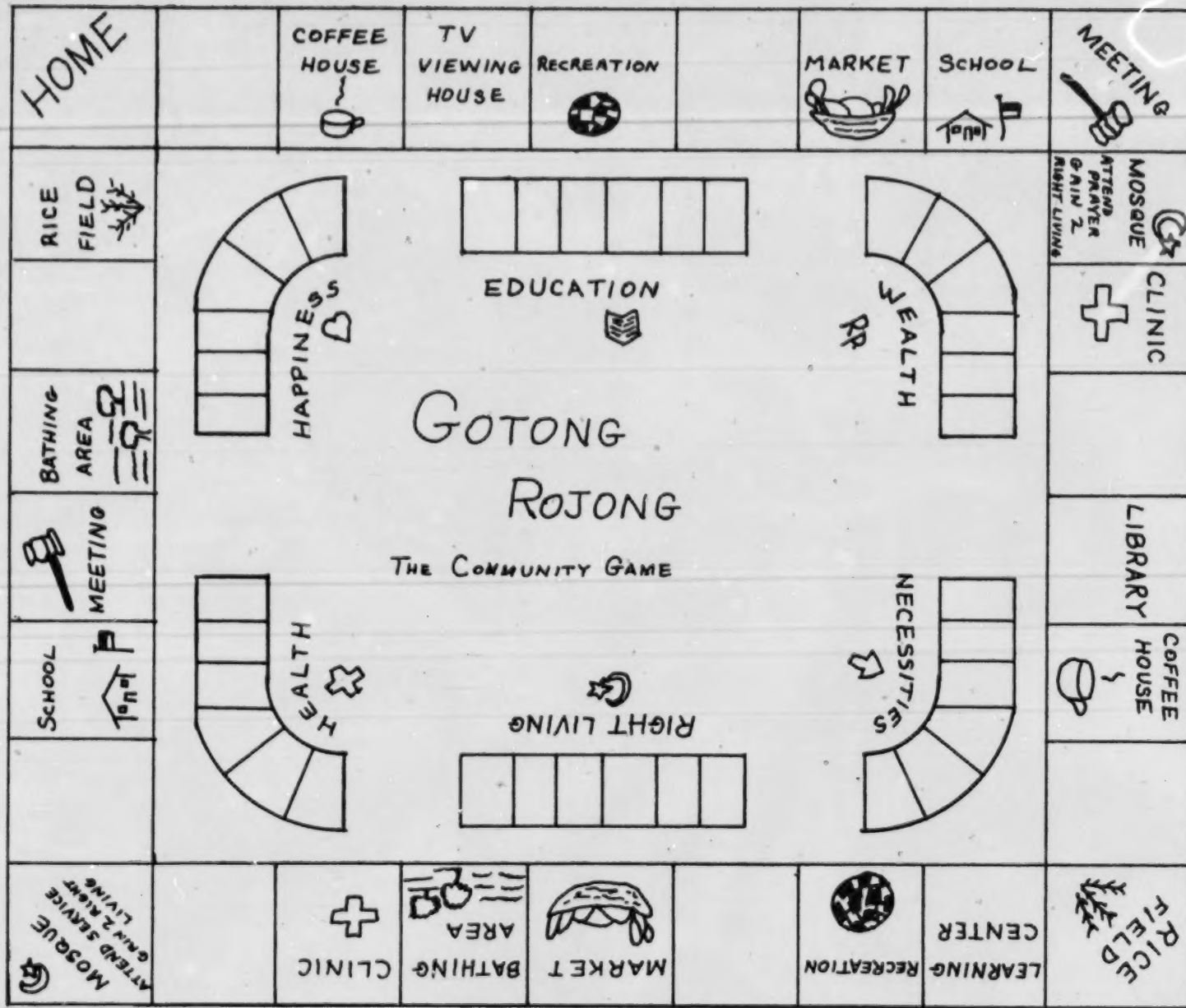
Rules:

1. Each player draws a role card.
2. Each player collects the resources which his card indicates
3. Extra resources are put in area marked "immobilized resources"
4. Players take turns advancing around the squares starting on the meeting square. After completing one circuit players may transfer resources to the community (inner circle). However, a player must always retain one of each kind of resource if possible. Players who are out of one resource cannot contribute another resource to the community. Nor can they move until someone else helps them by contributing the needed resource.

5. The game is won when all of the inner circle spaces are filled with a resource. At this point the successful community has been built.
6. When a player lands on the meeting square, a meeting is called. All players stay where they are on the board but all participate in the meeting.
7. When the community or a player "loses" resources, they are returned to the "immobilized resource" area.
8. Any player whose wealth exceeds that of the village head may trade roles with the village head.
9. To make the game go faster all resources on the board and the cards CAN BE DOUBLED.

Resources given out at the beginning:

<u>Roles</u>	<u>Wealth</u>	<u>Health</u>	<u>Happiness</u>	<u>Education</u>	<u>Necessities</u>	<u>Right Living</u>
Village Head	3	3	3	3	3	2
Doctor	3	3	0	3	3	0
Merchant	2	1	1	2	1	1
School Teacher	1	1	1	3	1	2
Extension Worker	2	2	1	2	2	1
Farmer	2	1	1	1	2	0
Poor Farmer	1	1	2	1	1	2
Poor Farmer	1	1	1	1	1	1
Poor Farmer	1	1	3	1	1	3



IMMOBILIZED RESOURCES

Meeting Cards:

Should a well be built for the community? Gain 2 health and 2 happiness for community. Cost to members is 1 necessity each.

Doctor says everyone in the community needs vaccinations. Community pays doctor 2 wealth but community gains 2 health if it agrees.

Farmers are unhappy about irrigation arrangement. Agreement will cost the community 2 happiness but gain 2 necessities.

Village head proposes a tax of 2 wealth or 1 necessity on each player.

Farmers request evening classes for literacy and skills. If someone agrees to teach, the community gains 1 education.

Doctor claims the merchant owes him for services. Merchant claims the doctor owes him for purchases. If the community decision makes everyone happy, community gains 1 happiness.

Harvest festival is proposed. If accepted the community will gain 3 happiness but must give up 3 wealth.

The Extension worker needs to move his house. If the community agrees, each member gives 1 necessity to the community.

The poor farmers propose forming a credit union. If the proposal is accepted each player must contribute 1/2 of his wealth to the community (fractions are counted as wholes to be retained by the player).

Office is needed for village head. Cost is 1 wealth or 1 necessity per member. Community receives the members' contributions.

Recreation Cards:

Playing soccer near mosque on Friday. Lose 1 right living.

Son skips school to play soccer. Lose 1 Education.

Good Exercise. Gain 1 health.

Have fun with friends. Gain 1 happiness

Injured! Lose 1 health and 1 happiness.

Help community build playground. Gain 1 right living, 1 happiness.

Coffee house cards:

Fight! Lose 1 happiness, 1 right living.

Waste money gambling. Lose 1 wealth, 1 right living, 1 necessity.

You do not pay your bills. Lose 1 right living.

Meet friends. Gain 1 happiness.

Pay cash. Gain 1 right living.

Home cards:

Family members help each other. Gain 1 right living.

Home industry brings you 1 wealth, 2 necessities.

Keep animals away from house. Gain 2 health.

Due to family planning, you gain 1 wealth, 1 health, and 1 happiness.

Improve your house. Gain 1 necessity.

Too many children. Lose 1 wealth, 1 health, 1 necessity.

Daughter marries young. Lose 1 happiness, 1 right living.

Get disease from unsanitary conditions. Lose 1 wealth, 1 necessity.

Bad relationships in family. Lose 1 happiness.

Save money. Gain 1 wealth, 1 necessity.

Birth! Gain 1 happiness. Lose 1 necessity, 1 wealth.

Home industry brings you 1 wealth.

Wedding! Gain 2 happiness, lose 2 wealth.

Burial! Lose 1 happiness and 1 wealth.

Family members teach each other. Gain 1 education and 1 necessity.

Bathing Area cards:

Practice sanitation. Gain 1 health.

Loan your soap to a neighbor. Gain 1 right living.

Gain new friend. Gain 1 happiness.

Meet friends. Gain 1 happiness.

Clothes are stolen. Lose 1 happiness, 1 necessity.

Keep yourself clean. Gain 1 health.

Clinic cards:

Visit clinic for free check-up. Gain 1 health.

Vaccinated for cholera. Gain 2 health and 1 happiness.

Receive instruction in family planning. Gain 1 education.

Vaccinated for typhus. Gain 1 health.

Hit by car. Lose 1 health, 1 wealth and 1 happiness.

Doctor charges too much. Lose 1 wealth and 1 happiness.

No doctor. Lose 1 happiness and 1 health.

Catch malaria. Lose 1 wealth, 1 health.

Catch cholera. Lose 1 health, 1 happiness, 1 wealth.

Rice Fields:

Invest money wisely. Gain 1 wealth.

Good crop. Gain 2 wealth and 2 necessities.

Work hard for good crop. Gain 2 wealth and 2 necessities.

Good crop. Gain 1 wealth, 1 necessity and 1 happiness.

Bad weather. Lose 1 wealth, 1 happiness, 1 necessity.

Injured during work. Lose 1 happiness, 1 wealth.
 Neighbors help with harvest. Gain 1 happiness, 1 necessity, 1 wealth.
 You help neighbor with harvest. Gain 2 right living.
 Extension agent teaches you better crop practice. Gain 1 education.
 Refuse to help a neighbor in need. Lose 1 right living.
 Disease harms crop. Lose 1 wealth.

Market:

Invest money wisely. Gain 1 wealth.
 Extra job earns you 1 wealth and 1 necessity.
 You practice fair dealings in market. Gain 1 right living.
 You spend wisely. Gain 2 necessities and 1 wealth.
 You waste your money on silly items. Lose 1 necessity and 1 wealth.
 Cheated! Lose 2 happiness and 1 wealth.
 Good prices! Gain happiness and 1 wealth.
 Good quality! Gain 1 happiness, 1 wealth, 1 necessity.
 You bargain well! Gain 1 wealth and 1 happiness.
 Meet friends. Gain 1 happiness.
 You buy bad quality products. Lose 1 happiness, 1 wealth and 1 necessity.

School:

Learn good health practices. Gain 1 health.
 Materials cost you 1 wealth.
 Bad conduct! Lose 1 happiness and 1 education.

Good conduct! Gain 1 happiness and 1 education.

Daughter studies hard. Gain 1 education.

Attend night class to improve skills. Gain 1 education and 1 happiness.

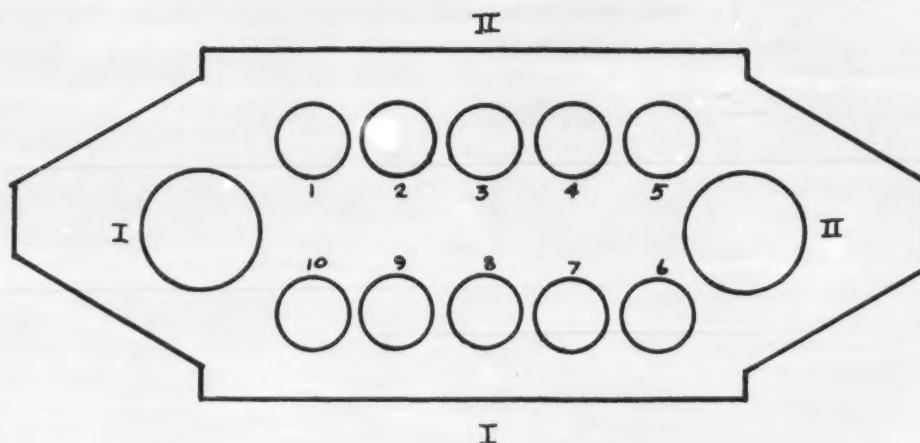
Son cheats. Lose 1 happiness and 1 right living.

You learn a home industry. Gain 1 wealth, 1 education and 1 happiness.

Teacher doesn't arrive. Lose 1 education.

Your son studies hard. Gain 2 education.

APPENDIX V



- Name of the Game: Galacang
- Number of Players: 2 (two) persons or groups
- Format:
1. Wooden board with holes (see diagram)
 2. 50 (fifty) pieces.
- Rules:
- a. I. represents a home for group I
 II. represents a home for group II
 - b. the ten small holes are filled with 5 pieces each.
 - c. group I starts to play by taking the pieces from one hole (make free choice) and moving in a clockwise direction, putting one piece in every hole they pass, including their home's hole. If the last piece lands on an empty hole, then they have to stop and give the turn to the other group. If the last piece falls in an occupied hole, then they can continue by taking all the pieces from the hole they land on and continuing. Also if they land on their own home's hole, they can start over from any hole on their side of the board.

- d. The play is finished when all the small holes are empty.
- e. The group with the most pieces in their home's hole is the winner.

Comment:

For an educational game, place question (problem) cards face down by each hole. When a player stops at a hole he must correctly answer the card to continue even if he ended on a hole with pieces in it. Ending on an empty hole the player must end his turn without answering a question (problem).

APPENDIX VI

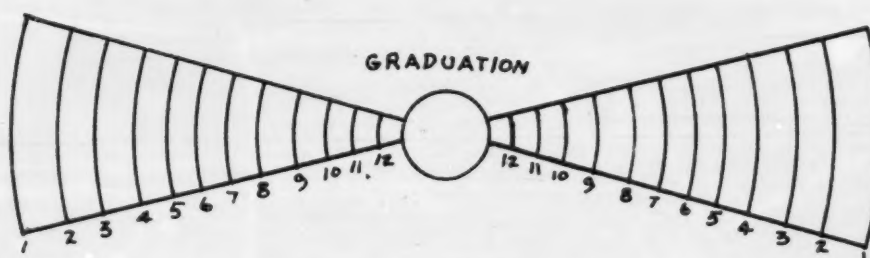
Name: School

Developed by: Saleh Marzuki, G. Budihardjo and Ujung Pandang NFE Workshop II

No. of Players: Two teams (2-12 players)

Objective: Rapid Recall (to sharpen math skills)

Format: a board or chalk diagram:



Process: Teams start in the first grade (outer line). The "teacher" (i.e., facilitator) asks a question such as $7 \times 8 = \underline{\hspace{2cm}}$? The first player to respond correctly enables his team to advance to the next grade. The winning team is the one which graduates first.

Options: As players gain confidence each team may be required to designate a player, in order, to answer each question. This puts more pressure on individuals. Also teams may be demoted for incorrect responses.

APPENDIX VII

Name: Marbles

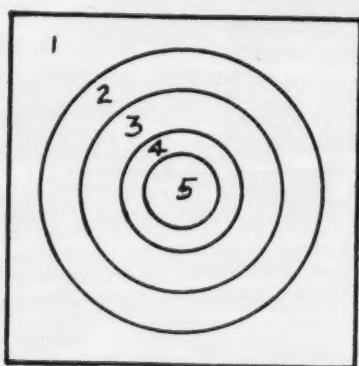
Developed by: Arlen Etling

Objective: Practice Math Skills

Materials: Marbles and cloth playing surface

No. of Participants: 2 to 6

Playing surface: One meter square concentric circles with numbers



Process: Players shoot their marbles from a pre-determined distance, aiming to land on the inner circle. Each player adds his score and records it. Then the player nearest the center picks up his winning marble and tries to shoot an opponent's marble from the surface. If he succeeds he records, as his own score, the number where the opponent's marble was originally. Then he may shoot at another marble. When he fails to shoot an opponent off the playing surface his turn ends and the player who is closest to the center at that moment becomes the shooter. Conceivably the first player's second marble could be closest to the center.

- Variations:
1. When a player fails to shoot a selected opponent's marble off the playing surface, he must subtract the number of the circle occupied by the opponent from his own score.
 2. For multiplication introduce a factor (i.e., all scores are multiplied by 2, 3, 4, etc.).
 3. For division each player starts with 300 points. Every score is divided into 60 and subtracted from the opponent's score. When the marbles are gone, high score wins.

APPENDIX VIII

Name: Bekland (Jacks)

Developed by: Arlen Etling and Amiduddin Mahmud

Objective: To practice counting. To add manual dexterity to number dice games

Materials: Two sets of number dice and a rubber (or tennis) ball

No. of Participants: From 2-5 individuals or teams

Process: Place dice so that each number from 1-10 shows (use the minus sign as the "1" for 10. Keeping the same faces showing, mix the dice. Taking turns, each player throws the ball and places the 1 in front of him then catches the ball. He throws again, grabs the 2 and places it beside the 1. If a player doesn't catch the ball, or selects the wrong number, or messes up the order of the blocks collected, the ball is passed to the next player. When one player has all ten numbers in order in front of him, he wins. The same process can be used for placing problems and solutions.

Objective: to combine manual dexterity with word building

Materials: letter dice (1 or 2 sets) and a ball

Using the process outlined above, words can be built by a player. A variation is for each player to place 1 letter then pass the ball. The second player must add a second letter and so on until a word is formed. The player who completes the word wins.